International Standard 8739

INTERNATIONAL ORGANIZATION FOR STANDARDIZATION•МЕЖДУНАРОДНАЯ ОРГАНИЗАЦИЯ ПО СТАНДАРТИЗАЦИИ•ORGANISATION INTERNATIONALE DE NORMALISATION

Grooved pins — Full-length parallel grooved, with pilot

Goupilles cannelées à cannelures constantes sur toute la longueur débouchantes, à bout pilote

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ISO 8739-1986 (E)

Foreword

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Draft International Standards adopted by the technical committees are circulated to the member bodies for approval before their acceptance as International Standards by the ISO Council. They are approved in accordance with ISO procedures requiring at least 75 % approval by the member bodies voting.

International Standard ISO 8739 was prepared by Technical Committee ISO/TC 2, *Fasteners*.

Users should note that all International Standards undergo revision from time to time and that any reference made herein to any other International Standard implies its latest edition, unless otherwise stated.

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Grooved pins — Full-length parallel grooved, with pilot

1 Scope and field of application

This International Standard specifies the characteristics of full-length parallel grooved pins with pilot which have three equally spaced grooves impressed longitudinally on their exterior surface and a pilot to facilitate insertion, with metric dimensions and nominal diameter, d_1, from 1,5 to 25 mm inclusive.

The displaced material to each side of the grooves forming an expanded diameter d_2 which is larger than the nominal diameter d_1 will cause a positive locking fit when these grooved pins are forced into a drilled hole equal to the nominal diameter d_1 (see clause 4).

2 References

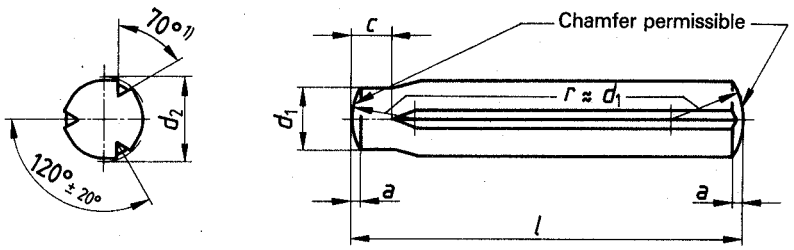
ISO 2081, *Metallic coatings — Electroplated coatings of zinc on iron or steel.*

ISO 3269, *Fasteners — Acceptance inspection.*

ISO 4520, *Chromate conversion coatings on electroplated zinc and cadmium coatings.*

ISO 8749, *Pins and grooved pins — Shear test.*

3 Dimensions



Dimensions in millimetres

d_1		nom.	1,5	2	2,5	3	4	5	6	8	10	12	16	20	25
		tol.	h9				h11								
c		max.	2	2	2,5	2,5	3	3	4	4	5	5	5	7	7
		min.	1	1	1,5	1,5	2	2	3	3	4	4	4	6	6
a		≈	0,2	0,25	0,3	0,4	0,5	0,63	0,8	1	1,2	1,6	2	2,5	3
Minimum shear strength double[2] kN			1,6	2,84	4,4	6,4	11,3	17,6	25,4	45,2	70,4	101,8	181	283	444
l[3]			Expanded diameter, d_2[4),5)]												
nom.	min.	max.	+ 0,05 0		± 0,05							± 0,10			
8	7,75	8,25	1,60	2,15	2,65	3,20	4,25	5,25	6,30	8,30	10,35	12,35	16,40	20,50	25,50
10	9,75	10,25													
12	11,5	12,5													
14	13,5	14,5													
16	15,5	16,5													
18	17,5	18,5													
20	19,5	20,5													
22	21,5	22,5													
24	23,5	24,5													
26	25,5	26,5													
28	27,5	28,5													
30	29,5	30,5													
32	31,5	32,5													
35	34,5	35,5													
40	39,5	40,5													
45	44,5	45,5													
50	49,5	50,5													
55	54,25	55,75													
60	59,25	60,75													
65	64,25	65,75													
70	69,25	70,75													
75	74,25	75,75													
80	79,25	80,75													
85	84,25	85,75													
90	89,25	90,75													
95	94,25	95,75													
100	99,25	100,75													

1) The grooving angle 70° applies only to grooved pins made from steel as shown in clause 5. The grooving angle may be modified depending on resilience of material.

2) Applies only to grooved pins made from steel as shown in clause 5.

3) The range of commercial lengths is between the stepped lines.

4) The expanded diameter d_2 applies only to pins made from steel as shown in clause 5. For other materials, for example stainless steel, a reduction amount shall be subtracted from the given values and should be agreed between customer and supplier.

5) For testing d_2, a GO/NO GO ring gauge should be used.

4 Application

The bore dimension of the grooved pin hole shall be equal to the nominal diameter, d_1, of the mating pin, and to tolerance H11.

5 Specifications and reference International Standards

Material	St = Free-cutting steel, hardness 125 to 245 HV. Other materials as agreed between customer and supplier.
Grooves	Form of groove at the discretion of the supplier.
Surface finish	Plain, i.e. pins to be supplied in natural finish, treated with a rust-preventative lubricant, unless otherwise specified by agreement between customer and supplier.
	Preferred coatings are black oxide, phosphate coating or zinc plating with chromate conversion coating (see ISO 2081 and ISO 4520). Other coatings as agreed between customer and supplier. All tolerances shall apply prior to the application of a plating or coating.
Workmanship	Parts shall be uniform in quality and free of irregularities or detrimental defects.
Shear strength test	The test shall be in accordance with ISO 8749.
Acceptability	The acceptance procedure is covered in ISO 3269.

6 Designation

Example for the designation of a full-length parallel grooved steel pin with pilot with nominal diameter, d_1 = 6 mm, and nominal length, l = 50 mm :

Grooved pin ISO 8739 - 6 × 50 - St